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Oral, Special SRTM Session

The Shuttle Radar Topography Mission

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The Shuttle Radar Topography Mission (SRTM), which flew successfully aboard Endeavour in February 2000, is a cooperative project between NASA and the National Imagery and Mapping Agency. The mission was designed to use a single-pass radar interferometer to produce a digital elevation model of the Earth's land surface between about 60 degrees north and 56 degrees south latitude. The DEM will have 30 m horizontal resolution and about 15 m vertical errors. Two ortho-rectified C-band image mosaics are also planned. Data processing will be completed by the end of 2002.

SRTM used a modification of the radar instrument that comprised the Spaceborne Radar Laboratory that flew twice on the Shuttle Endeavour in 1994. To collect the interferometric data, a 60 m mast, additional C-band antenna, and improved tracking and navigation devices were added. A second X-band antenna was also added by the German Space Agency, and produced higher resolution topographic measurements in strips nested within the full, C-band coverage.

First results indicate that the radars and ancillary instruments worked very well. Data played back to the ground during the flight were processed to DEMs and products released hours after acquisition. An extensive program for calibration and verification of the SRTM data is now underway. When complete later this year, systematic processing of the data will begin, with final products emerging a continent at a time. Products will be transferred to the US Geological Survey's EROS Data Center for civilian archive and distribution. NIMA will handle Department of Defense distribution.

More information can be found at the SRTM Web site: http://www.jpl.nasa.gov/srtm/

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